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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,255	02/27/2002	Ryujiro Udo	500.41296X00	2556

20457 7590 06/18/2003

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EXAMINER

HARRISON, MONICA D

ART UNIT PAPER NUMBER

2829

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/083,255

Applicant(s)

UDO ET AL.

Examiner

Monica D. Harrison

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: .

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Sato (6,124,725).

1. Sato discloses an apparatus for processing a semiconductor which comprises an airtight processing chamber from the air (Figure 7, reference 44; column 12, lines 4-11), a wafer stage installed in the chamber (column 12, lines 62-67; column 13, lines 1-14), a wafer sensor module equipped with sensor probes, each sensor probe capable of detecting at least one of the electric current passing through an article to be processed, voltage and temperature, said wafer sensor module positioned on the stage after carried into the processing chamber by transporting means for the article to be processed (column 7 line 11 thru column 9 line 63).

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (6,124,725) in view of Moslehi (5,719,495).

2. Sato discloses all subject matter except wherein measured values detected by the sensor probes are converted to optical signals, which are led out from the processing chamber (claim 2), wherein the optical signals are received by means for receiving optical signals equipped on the stage (claim 3), wherein the stage has means for applying an optical voltage to at least one point of the wafer sensor module (claim 4), and wherein the means for receiving optical signals processes at least two optical signals caused by measured values in common and leads to outside of the semiconductor processing apparatus (claim 5).

Moslehi discloses wherein measured values detected by the sensor probes are converted to optical signals, which are led out from the processing chamber (column 6, lines 33-37), wherein the optical signals are received by means for receiving optical signals equipped on the stage (column 13, lines 1-33), wherein the stage has means for applying an optical voltage to at least one point of the wafer sensor module (column 16, lines 29-51), and wherein the means for receiving optical signals processes at least two optical signals caused by measured values in common and leads to outside of the semiconductor processing apparatus (column 12, lines 29-67).

Since Sato and Moslehi are both from the same field of endeavor, the purpose disclosed by Moslehi would have been recognized as pertinent art of Sato.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Sato with the teaching of Moslehi for the purpose of the diagnosis and prognosis of a semiconductor device fabrication process.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (6,124,725) in view of Moslehi (5,719,495).

3. Sato discloses a wafer sensor module comprising a silicon substrate as a main body (Figure 1, reference W) and at least one sensor probe (Figure 1, reference 12A). However, Sato does not disclose a luminescent device formed on the main body (claim 6) and wherein the silicon substrate as a main body has almost the same shape as a semiconductor wafer to be processed (claim 7)

Moslehi discloses a luminescent device formed on the main body (column 13, lines 1-33) and wherein the silicon substrate as a main body has almost the same shape as a semiconductor wafer to be processed (column 9, lines 45-58).

Since Sato and Moslehi are both from the same field of endeavor, the purpose disclosed by Moslehi would have been recognized as pertinent art of Sato.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Sato with the teaching of Moslehi for the purpose of having the sensor respond to spectral reflectance and transmittance measurements yielding surface roughness and thickness measurements as well as diagnosing and prognosing the analysis results and control signals.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica D. Harrison whose telephone number is 703-305-4758. The examiner can normally be reached on M-F 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 703-308-1233. The fax phone numbers for the

• Application/Control Number: 10/083,255  
Art Unit: 2829

Page 5

organization where this application or proceeding is assigned are 703-306-7382 for regular communications and 703-305-3839 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

Monica D. Harrison  
AU 2829

mdh  
June 10, 2003

  
**EVAN PERT**